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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/678,423

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Gregg D. Wilensky

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EXAMINER

SMITH, JEFFREY S

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/678,423	Applicant(s) WILENSKY, GREGG D.	
	Examiner JEFFREY S. SMITH	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-30 and 32-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-30 and 32-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413) |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) ☒ Information Disclosure Statement(s) (PTO/SB/08) | 5) ☐ Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/08</u> . | 6) ☐ Other: _____ |

/Jingge Wu/

Supervisory Patent Examiner, Art Unit 2624/J. W./

Supervisory Patent Examiner, Art Unit 2624/J. W./

Supervisory Patent Examiner, Art Unit 2624**DETAILED ACTION**

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 20-30 and 32-38 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are for a software product embodied in a tangible medium. A “software product” is not patentable subject matter. Furthermore, the specification states that the “product” can be a propagated signal, which is non-statutory subject matter. The preamble to this claim should read “A computer readable storage device storing a computer program which, when executed by a computer processor, causes the computer processor to perform a method comprising” to be consistent with the application as originally filed and to fall within statutory subject matter as outlined in MPEP 2106.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11, 13-30 and 32-38 are rejected under 35 U.S.C. 103 as being unpatentable over chapter 3 of "Digital Image Processing" by Gonzalez et al. ("Gonzalez") as cited in the IDS in view of U.S. Patent Application Publication Number 2002/0186387 by Moroney et al. ("Moroney").

For claims 1 and 20, Gonzalez discloses specifying a first function of a local attribute based on values of the local attribute in the image (p. 99, obtaining the histogram of the given image), specifying a second function of the local attribute based on an image adjustment depending upon an adjustment parameter (the desired histogram of the image as shown for example in figure 3.19 and as calculated by eq. 3.13), calculating an object function value for each of two or more values of the adjustment parameter, each object function value including accumulated differences between the first and second function at a plurality of values of the local attribute according to a functional weight that depends on the value of the local attribute (using equation 3.17 to map the difference between the actual value and the desired value), Gonzalez discloses the adjustment curve in figure 3.19 for adjusting the values from actual to desired. Gonzalez does not explicitly disclose determining a value of the adjustment parameter for adjusting the image.

Moroney in figure 4 shows a plurality of adjustment parameter curves that are used to adjust the image, and one of the curves is selected to provide the desired adjustment based on the calculated object function values, (see paragraph 59 and

figure 9), where the object function value is calculated according to a functional weight that depends on the value of the local attribute (abstract).

It would have been obvious to a person of ordinary skill in the art at the time of invention to use the adjustable parameters of Moroney with the image adjustment method of Gonzalez for the benefit of providing local color correction as taught by Moroney in the abstract. Furthermore, the Supreme Court has held that in analyzing the obviousness of combining elements, a court need not find specific teachings, but rather may consider “the background knowledge possessed by a person having ordinary skill in the art” and “the inferences and creative steps that a person of ordinary skill in the art would employ.” See *KSR Int’l v. Teleflex, Inc.*, 127 S. Ct. 1727, 1740-41, 82 USPQ2d 1385, 1396 (2007). To be nonobvious, an improvement must be “more than the predictable use of prior art elements according to their established functions.” *Id.* Here the combination is the predictable use of two image processing methods, one by the other, according to their established functions.

For claims 2 and 21, specifying the first function of the local attribute includes specifying the first function based on modified values of the local attribute generated by another image adjustment when applied to the image is shown by Moroney in figure 2 by adjusting the image to a monochrome image.

For claims 3 and 22, specifying the first function of the local attribute includes specifying the first function based on a cumulative distribution of the values is shown by Gonzalez in chapter 3.

For claims 4 and 23, specifying the cumulative distribution based on a density histogram generated by binning values of the local attribute in the image is shown by Gonzalez.

For claims 5 and 24, the cumulative distribution is a contrast-constrained cumulative distribution is shown by Gonzalez.

For claims 6 and 25, specifying the second function of the local attribute includes specifying an attribute mapping for the local attribute based on the image adjustment, the attribute mapping depending on the adjustment parameter is shown by Moroney in figure 4.

For claims 7 and 26, the attribute mapping is specified by a non-local function depending, for each location within the image, on a neighborhood intensity characterizing pixel values in a neighborhood surrounding the location is shown by Moroney in the abstract.

For claims 8 and 27, specifying the second function of the local attribute includes, for each location within the image, substituting the corresponding neighborhood intensity with a pixel value at the location is shown by Moroney in the abstract.

For claims 9 and 28, specifying the second function of the local attribute includes specifying a composite function of the local attribute based on the attribute mapping and a non-linear function defining a desired distribution for the local attribute is shown by Moroney in figure 4.

For claims 10 and 29, the Gaussian distribution is shown by Gonzalez.

For claims 11, 13-14, 30 and 32-33, Gonzalez has an object function as discussed on section 3.3.2.

For claims 15-19 and 34-38, Gonzalez shows in Figure 3.17 that the adjustments can be performed for several image attributes such as luminosity, tone, color and highlight.

Response to Arguments

Applicant's arguments with respect to claims 1-11, 13-30 and 32-38 have been considered but are moot in view of the new ground(s) of rejection.

Specifically, Moroney has free parameters to vary, as shown for example in figure 4 and as discussed throughout the application, to provide parameterized adjustment of the color values.

With respect to the arguments regarding 35 U.S.C. 101, an article of manufacture is a statutory class. A "software product" is not a statutory class and applicant has provided no basis for asserting a software product as statutory subject matter. With respect to the basis for suggesting applicant to amend to recite a computer readable storage device, the legal authority for this is discussed in detail throughout MPEP section 2106, no legal decision has held "machine readable medium" to be statutory subject matter and applicant has provided no statutory basis for this claim.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY S. SMITH whose telephone number is (571)

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270-1235. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429.

JSS

/J. W./

Supervisory Patent Examiner, Art Unit 2624

February 26, 2008